

Engineering Interpretations

Construction Material and Excavating

Soils are rated as sources for road fill, topsoil, sand, and gravel. Suitability ratings of good, fair, or poor are given for soils used as a source of road fill and topsoil. Ratings of probable and improbable are given for sand and gravel. A rating of probable means that on the basis of the available evidence, the source material is likely to be in or below the soil. A rating of improbable means that the source material is unlikely to be in or below the soil. The ratings for sand and gravel do not consider the quality of the source material because quality depends on how the source material is to be used.

Road Fill

Road fill consists of soil material that is excavated from its original position and used in road embankments elsewhere. The evaluations for road fill are for low embankments that generally are less than 6 feet in height and are less exacting in design than high embankments such as those along superhighways. The rating is given for the whole soil, from the surface to a depth of about 5 feet, based on the assumption that soil horizons will be mixed in loading, dumping, and spreading. Soils are rated as to the amount of material available for excavation, the ease of excavation, and how well the material performs after it is in place.

Sand

Sand as a construction material is usually defined as particles ranging in size from 0.074 mm (sieve #200) to 4.75 mm (sieve #4) in diameter. Sand is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated. If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

Gravel

Gravel as a construction material is defined as particles ranging in size from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter.

Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil

The term "topsoil" has several meanings. As used here, the term describes soil material used to cover an area so as to improve soil conditions for establishment and maintenance of adapted vegetation. Generally, the upper part of the soil, which is richest in organic matter, is most desirable; however, material excavated from deeper layers is also used. In this rating, the upper 40 inches of soil material is evaluated for use as topsoil. In the

borrow area, the material below 40 inches is evaluated for its suitability for plant growth after the upper 40 inches is removed. The soil properties that are used to rate the soil as topsoil are those that affect plant growth, the ease of excavation, loading, and spreading, and those that affect the reclamation of the borrow area.

This subsection includes:

- **(a) Construction Materials and Excavating**

Crawford County, Missouri: Detailed Soil Map Legend

Construction Materials and Excavating

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66014: Haymond-----	Not limited		Limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 0.84	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Not limited		Moderately limited ~flooding (moderately limited) ~cutbanks cave (slightly limited)	0.60 0.29
70028: Moko-----	Very limited ~depth to bedrock (very limited)	1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	0.75 0.75	Very limited ~depth to bedrock (very limited) ~small stones (very limited) ~large surface stones (limited)	1.00 1.00 0.79	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)	1.00 0.29 0.04
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73012: Gravois-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (slightly limited)	1.00 0.76 0.27	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (bottom layer)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (bottom layer)	1.00 1.00 1.00	Limited ~wetness (limited) ~too clayey (moderately limited) ~too acid (slightly limited)	0.76 0.48 0.18	Very limited ~cutbanks cave (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00
73032: Gatewood-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~wetness (slightly limited)	1.00 1.00 0.26	Very limited ~hard bedrock <40" (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73035: Gravois-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (slightly limited)	1.00 0.76 0.27	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (bottom layer)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (bottom layer)	1.00 1.00 1.00	Limited ~wetness (limited) ~too clayey (moderately limited) ~slope (moderately limited)	0.76 0.48 0.37	Very limited ~cutbanks cave (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00
73039: Glensted-----	Very limited ~shrink-swell (very limited) ~wetness (very limited) ~low strength (very limited)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~wetness (very limited)	1.00	Very limited ~wetness (very limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)	1.00 0.48 0.29
73053: Lily-----	Very limited ~depth to bedrock (very limited)	1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~depth to bedrock (very limited) ~too acid (slightly limited) ~too clayey (slightly limited)	1.00 0.30 0.04	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (very limited)	1.00 1.00
Bender-----	Very limited ~depth to bedrock (very limited) ~large stones (slightly limited)	1.00 0.09	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~possible source (bottom layer) ~possible source (thickest layer)	0.42 0.42	Very limited ~depth to bedrock (very limited) ~small stones (very limited) ~large stones >25% (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (very limited) ~large stones (slightly limited)	1.00 1.00 0.09

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73066: Bender-----	Very limited ~depth to bedrock (very limited) ~large stones (slightly limited)	1.00 0.09	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~possible source (bottom layer) ~possible source (thickest layer)	0.42 0.42	Very limited ~depth to bedrock (very limited) ~small stones (very limited) ~large stones >25% (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (very limited) ~large stones (slightly limited)	1.00 1.00 0.09
73067: Bender-----	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~large stones (slightly limited)	1.00 1.00 0.09	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~possible source (bottom layer) ~possible source (thickest layer)	0.42 0.42	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~small stones (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73089: Rueter-----	Limited ~slope (limited) ~large stones (slightly limited) ~shrink-swell (slightly limited)	0.92 0.29 0.09	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (thickest layer)	1.00 1.00 0.66	Limited ~excess fines (bottom layer) ~excess fines (thickest layer) ~small stones (thickest layer)	0.99 0.99 0.66	Very limited ~slope (very limited) ~small stones (very limited) ~area reclaim (very limited)	1.00 1.00 1.00	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)	1.00 0.83 0.29

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73094: Gateway-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~too clayey (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~wetness (very limited)	1.00 1.00 1.00
73098: Plato-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~wetness (very limited)	1.00 1.00 0.99	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~dense layer <20" (very limited) ~too clayey (very limited) ~wetness (very limited)	1.00 1.00 0.99	Very limited ~dense layer <20" (very limited) ~wetness (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
73135: Union-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.82 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Limited ~too clayey (limited) ~dense layer (limited) ~wetness (limited)	0.90 0.86 0.82	Very limited ~cutbanks cave (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00
73136: Union-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.82 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Limited ~too clayey (limited) ~dense layer (limited) ~wetness (limited)	0.94 0.86 0.82	Very limited ~cutbanks cave (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73159: Yelton-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.82 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~dense layer <20" (very limited) ~wetness (limited) ~too clayey (moderately limited)	1.00 0.82 0.48	Very limited ~dense layer <20" (very limited) ~wetness (very limited) ~cutbanks cave (slightly limited)	1.00 1.00 0.29
73162: Alred-----	Limited ~slope (limited)	0.92	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 0.75	Very limited ~slope (very limited) ~small stones (very limited) ~large surface stones (limited)	1.00 1.00 0.79	Very limited ~slope (very limited) ~cutbanks cave (very limited) ~too clayey (limited)	1.00 1.00 0.87
Rueter-----	Limited ~slope (limited) ~large stones (slightly limited) ~shrink-swell (slightly limited)	0.92 0.29 0.09	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (thickest layer)	1.00 1.00 0.66	Limited ~small stones (thickest layer) ~small stones (bottom layer) ~possible source (bottom layer)	0.66 0.66 0.50	Very limited ~slope (very limited) ~small stones (very limited) ~area reclaim (very limited)	1.00 1.00 1.00	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)	1.00 0.83 0.29
73164: Bender-----	Very limited ~slope (very limited) ~depth to bedrock (very limited) ~large stones (slightly limited)	1.00 1.00 0.09	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~possible source (bottom layer) ~possible source (thickest layer)	0.42 0.42	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~small stones (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73166: Viburnum-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~wetness (limited)	1.00 1.00 0.76	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~too clayey (very limited) ~small stones (very limited) ~wetness (limited)	1.00 1.00 0.76	Very limited ~cutbanks cave (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00
Tonti-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.76 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	1.00 0.50	Very limited ~dense layer <20" (very limited) ~wetness (limited) ~too clayey (moderately limited)	1.00 0.76 0.55	Very limited ~dense layer <20" (very limited) ~wetness (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
73168: Swiss-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~wetness (slightly limited)	1.00 1.00 0.03	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~too clayey (very limited) ~dense layer (moderately limited) ~too acid (moderately limited)	1.00 0.46 0.42	Limited ~wetness (limited) ~too clayey (limited) ~dense layer (moderately limited)	0.99 0.79 0.46
73169: Beemont-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~slope (limited)	1.00 1.00 0.92	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (slightly limited)	1.00 1.00 0.30	Very limited ~slope (very limited) ~too clayey (very limited) ~wetness (very limited)	1.00 1.00 1.00

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73169: (cont) Gateway-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~too clayey (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~wetness (very limited)	1.00 1.00 1.00
73170: Beemont-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~wetness (slightly limited)	1.00 1.00 0.12	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~large surface stones (slightly limited)	1.00 0.30 0.13	Very limited ~too clayey (very limited) ~wetness (very limited) ~depth to bedrock (moderately limited)	1.00 1.00 0.32
Gateway-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~wetness (slightly limited)	1.00 1.00 0.26	Very limited ~hard bedrock <40" (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00
73171: Plato, eroded--	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~wetness (very limited)	1.00 1.00 0.99	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~too clayey (very limited) ~wetness (very limited) ~dense layer (limited)	1.00 0.99 0.99	Very limited ~wetness (very limited) ~cutbanks cave (very limited) ~dense layer (limited)	1.00 1.00 0.99

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73172: Rosati-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~wetness (limited)	1.00 1.00 0.98	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~too clayey (very limited) ~wetness (limited) ~dense layer (limited)	1.00 0.98 0.88	Very limited ~wetness (very limited) ~dense layer (limited) ~too clayey (moderately limited)	1.00 0.88 0.45
73173: Lily-----	Very limited ~depth to bedrock (very limited)	1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~depth to bedrock (very limited) ~too acid (slightly limited) ~too clayey (slightly limited)	1.00 0.30 0.04	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (very limited)	1.00 1.00
Yelton-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.82 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~dense layer <20" (very limited) ~wetness (limited) ~too clayey (moderately limited)	1.00 0.82 0.48	Very limited ~dense layer <20" (very limited) ~wetness (very limited) ~cutbanks cave (slightly limited)	1.00 1.00 0.29
73174: Lily-----	Very limited ~depth to bedrock (very limited)	1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~depth to bedrock (very limited) ~slope (limited) ~too acid (slightly limited)	1.00 0.63 0.30	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (very limited) ~slope (limited)	1.00 1.00 0.63

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73174: (cont) Yelton-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.82 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~dense layer <20" (very limited) ~wetness (limited) ~slope (limited)	1.00 0.82 0.63	Very limited ~dense layer <20" (very limited) ~wetness (very limited) ~slope (limited)	1.00 1.00 0.63
73175: Poynor-----	Not limited		Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 0.99	Very limited ~small stones (very limited) ~too acid (slightly limited) ~large stones (slightly limited)	1.00 0.12 0.01	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited)	1.00 0.29
Bendavis-----	Very limited ~depth to bedrock (very limited) ~wetness (slightly limited)	1.00 0.12	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	0.75 0.75	Very limited ~depth to bedrock (very limited) ~small stones (very limited) ~too acid (moderately limited)	1.00 1.00 0.36	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (very limited) ~wetness (very limited)	1.00 1.00 1.00
73176: Bendavis-----	Very limited ~depth to bedrock (very limited) ~wetness (slightly limited)	1.00 0.12	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	0.75 0.75	Very limited ~depth to bedrock (very limited) ~small stones (very limited) ~slope (limited)	1.00 1.00 0.63	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (very limited) ~wetness (very limited)	1.00 1.00 1.00

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Construction Materials and Excavating

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73176: (cont) Poynor-----	Not limited		Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 0.99	Very limited ~small stones (very limited) ~slope (limited) ~large surface stones (slightly limited)	1.00 0.63 0.13	Very limited ~too clayey (very limited) ~slope (limited) ~cutbanks cave (slightly limited)	1.00 0.63 0.29
73181: Useful-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~depth to bedrock (slightly limited)	1.00 1.00 0.10	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~too clayey (very limited) ~slope (limited) ~too acid (slightly limited)	1.00 0.63 0.12	Limited ~wetness (limited) ~slope (limited) ~too clayey (moderately limited)	0.99 0.63 0.45
Gatewood-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~slope (limited)	1.00 1.00 0.63	Very limited ~hard bedrock <40" (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00
73200: Sonsac-----	Very limited ~depth to bedrock (very limited) ~shrink-swell (very limited)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~possible source (thickest layer) ~possible source (bottom layer)	0.42 0.42	Very limited ~small stones (very limited) ~too clayey (very limited) ~depth to bedrock (limited)	1.00 1.00 0.97	Very limited ~hard bedrock <40" (very limited) ~cutbanks cave (very limited) ~too clayey (limited)	1.00 1.00 0.99

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Construction Materials and Excavating

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73210: Goss-----	Very limited ~low strength (very limited) ~slope (very limited) ~large stones (limited)	1.00 1.00 0.70	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (thickest layer)	1.00 1.00 0.83	Limited ~excess fines (bottom layer) ~small stones (thickest layer) ~small stones (bottom layer)	1.00 0.83 0.83	Very limited ~slope (very limited) ~large surface stones (very limited) ~large stones >25% (very limited)	1.00 1.00 1.00	Very limited ~slope (very limited) ~too clayey (very limited) ~large stones (limited)	1.00 1.00 0.70
73214: Moko-----	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~large stones (slightly limited)	1.00 1.00 0.16	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (bottom layer)	1.00 1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer) ~small stones (bottom layer)	1.00 1.00 1.00	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~large surface stones (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)	1.00 1.00 0.29
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73215: Crider-----	Very limited ~low strength (very limited)	1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Limited ~too clayey (limited)	0.61	Slightly limited ~cutbanks cave (slightly limited) ~too clayey (slightly limited)	0.29 0.27
73271: Moko-----	Very limited ~slope (very limited) ~depth to bedrock (very limited)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	0.99 0.99	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~small stones (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)	1.00 1.00 0.29

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Construction Materials and Excavating

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73271: (cont) Rock outcrop----	Not rated		Not rated		Not rated		Not rated		Not rated	
73272: Hildebrecht----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.82 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	1.00 0.33	Very limited ~dense layer <20" (very limited) ~large stones (limited) ~wetness (limited)	1.00 0.99 0.82	Very limited ~dense layer <20" (very limited) ~wetness (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
73273: Coulstone-----	Very limited ~slope (very limited) ~wetness (limited) ~large stones (slightly limited)	1.00 0.82 0.01	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~slope (very limited) ~small stones (very limited) ~large surface stones (very limited)	1.00 1.00 1.00	Very limited ~slope (very limited) ~wetness (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
Bender-----	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~large stones (slightly limited)	1.00 1.00 0.29	Limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (thickest layer)	0.95 0.95 0.30	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer) ~small stones (thickest layer)	1.00 1.00 0.30	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~small stones (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
73274: Scholten-----	Limited ~wetness (limited)	0.76	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~possible source (bottom layer) ~possible source (thickest layer)	0.25 0.25	Very limited ~small stones (very limited) ~dense layer (limited) ~wetness (limited)	1.00 1.00 0.76	Very limited ~wetness (very limited) ~cutbanks cave (very limited) ~dense layer (limited)	1.00 1.00 1.00

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73275: Gravois-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.76 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (bottom layer)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (bottom layer)	1.00 1.00 1.00	Limited ~wetness (limited) ~too clayey (moderately limited) ~too acid (slightly limited)	0.76 0.48 0.18	Very limited ~cutbanks cave (very limited) ~wetness (very limited) ~too clayey (very limited)	1.00 1.00 1.00
Goss-----	Very limited ~shrink-swell (very limited)	1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (thickest layer)	1.00 1.00 0.10	Possible source ~excess fines (thickest layer) ~possible source (bottom layer) ~small stones (thickest layer)	0.99 0.42 0.10	Very limited ~small stones (very limited) ~area reclaim (very limited) ~too clayey (very limited)	1.00 1.00 1.00	Very limited ~cutbanks cave (very limited) ~slope (limited) ~too clayey (limited)	1.00 0.63 0.63
73276: Rueter-----	Slightly limited ~large stones (slightly limited) ~shrink-swell (slightly limited)	0.29 0.09	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (thickest layer)	1.00 1.00 0.66	Limited ~excess fines (bottom layer) ~excess fines (thickest layer) ~small stones (thickest layer)	0.99 0.99 0.66	Very limited ~small stones (very limited) ~area reclaim (very limited) ~too acid (moderately limited)	1.00 1.00 0.36	Limited ~too clayey (limited) ~cutbanks cave (slightly limited) ~large stones (slightly limited)	0.83 0.29 0.29
Hildebrecht----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.82 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	1.00 0.42	Limited ~dense layer (limited) ~wetness (limited) ~too clayey (limited)	0.96 0.82 0.69	Very limited ~wetness (very limited) ~cutbanks cave (very limited) ~too clayey (very limited)	1.00 1.00 1.00

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73277: Goss-----	Very limited ~shrink-swell (very limited)	1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (thickest layer)	1.00 1.00 0.10	Possible source ~excess fines (thickest layer) ~possible source (bottom layer) ~small stones (thickest layer)	0.99 0.42 0.10	Very limited ~small stones (very limited) ~area reclaim (very limited) ~too clayey (very limited)	1.00 1.00 1.00	Very limited ~cutbanks cave (very limited) ~slope (limited) ~too clayey (limited)	1.00 0.63 0.63
73278: Rueter-----	Very limited ~slope (very limited)	1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~excess fines (bottom layer) ~possible source (thickest layer)	1.00 0.50	Very limited ~slope (very limited) ~small stones (very limited) ~large stones (limited)	1.00 1.00 0.80	Very limited ~slope (very limited) ~cutbanks cave (very limited)	1.00 1.00
73279: Sonsac-----	Very limited ~depth to bedrock (very limited) ~shrink-swell (very limited) ~low strength (very limited)	1.00 1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~slope (very limited) ~small stones (very limited) ~too clayey (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
Moko-----	Very limited ~depth to bedrock (very limited) ~slope (limited)	1.00 0.83	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	0.75 0.33	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~small stones (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)	1.00 1.00 0.29
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73280: Alred-----	Not limited		Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~excess fines (bottom layer) ~possible source (thickest layer)	1.00 0.50	Very limited ~small stones (very limited) ~large surface stones (limited) ~too acid (slightly limited)	1.00 0.79 0.24	Very limited ~cutbanks cave (very limited) ~too clayey (very limited)	1.00 1.00
73281: Hobson-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.64 0.45	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer) ~small stones (bottom layer)	1.00 1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer) ~small stones (bottom layer)	1.00 1.00 1.00	Very limited ~dense layer <20" (very limited) ~slope (limited) ~wetness (limited)	1.00 0.84 0.64	Very limited ~dense layer <20" (very limited) ~wetness (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00
73282: Alred-----	Limited ~slope (limited)	0.67	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~excess fines (bottom layer) ~possible source (thickest layer)	1.00 0.50	Very limited ~slope (very limited) ~small stones (very limited) ~large surface stones (limited)	1.00 1.00 0.79	Very limited ~slope (very limited) ~cutbanks cave (very limited) ~too clayey (very limited)	1.00 1.00 1.00
Sonsac-----	Very limited ~depth to bedrock (very limited) ~shrink-swell (very limited) ~slope (slightly limited)	1.00 1.00 0.08	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~possible source (thickest layer) ~possible source (bottom layer)	0.42 0.42	Very limited ~slope (very limited) ~small stones (very limited) ~too clayey (very limited)	1.00 1.00 1.00	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (very limited)	1.00 1.00 1.00

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73283: Courtois, eroded-----	Very limited		Very limited		Very limited		Limited		Very limited	
	~low strength (very limited)	1.00	~excess fines (thickest layer)	1.00	~excess fines (bottom layer)	1.00	~too clayey (limited)	1.00	~wetness (very limited)	1.00
	~shrink-swell (very limited)	1.00	~excess fines (bottom layer)	1.00	~excess fines (thickest layer)	1.00	~wetness (limited)	0.82	~too clayey (slightly limited)	0.29
	~wetness (limited)	0.82					~too acid (moderately limited)	0.36	~cutbanks cave (slightly limited)	0.29
73284: Courtois-----	Very limited		Very limited		Very limited		Limited		Very limited	
	~shrink-swell (very limited)	1.00	~excess fines (thickest layer)	1.00	~excess fines (thickest layer)	1.00	~too clayey (limited)	0.88	~wetness (very limited)	1.00
	~low strength (very limited)	1.00	~excess fines (bottom layer)	1.00	~excess fines (bottom layer)	1.00	~wetness (limited)	0.82	~cutbanks cave (very limited)	1.00
	~wetness (limited)	0.82					~area reclaim (limited)	0.68	~too clayey (very limited)	1.00
Goss-----	Slightly limited		Very limited		Possible source		Very limited		Very limited	
	~shrink-swell (slightly limited)	0.30	~excess fines (thickest layer)	1.00	~excess fines (thickest layer)	0.99	~small stones (very limited)	1.00	~cutbanks cave (very limited)	1.00
			~excess fines (bottom layer)	1.00	~possible source (bottom layer)	0.42	~area reclaim (very limited)	1.00	~too clayey (limited)	0.63
			~small stones (thickest layer)	0.10	~small stones (thickest layer)	0.10	~too clayey (very limited)	1.00	~slope (moderately limited)	0.37
73285: Useful-----	Very limited		Very limited		Very limited		Very limited		Very limited	
	~low strength (very limited)	1.00	~excess fines (thickest layer)	1.00	~excess fines (bottom layer)	1.00	~too clayey (very limited)	1.00	~too clayey (very limited)	1.00
	~shrink-swell (very limited)	1.00	~excess fines (bottom layer)	1.00	~excess fines (thickest layer)	1.00	~depth to bedrock (slightly limited)	0.12	~wetness (limited)	0.99
	~depth to bedrock (moderately limited)	0.54					~wetness (slightly limited)	0.03	~depth to bedrock (limited)	0.72

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73285: (cont) Courtois-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~wetness (limited)	1.00 1.00 0.82	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~too clayey (limited) ~wetness (limited) ~area reclaim (limited)	0.98 0.82 0.68	Very limited ~wetness (very limited) ~cutbanks cave (very limited) ~too clayey (very limited)	1.00 1.00 1.00
73286: Useful-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~depth to bedrock (slightly limited)	1.00 1.00 0.05	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~too clayey (very limited) ~slope (slightly limited) ~wetness (slightly limited)	1.00 0.04 0.03	Limited ~wetness (limited) ~too clayey (moderately limited) ~depth to bedrock (moderately limited)	0.99 0.45 0.32
Courtois-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~wetness (limited)	1.00 1.00 0.82	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~too clayey (very limited) ~wetness (limited) ~slope (slightly limited)	1.00 0.82 0.16	Very limited ~wetness (very limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)	1.00 0.39 0.29
73287: Useful-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~slope (limited)	1.00 1.00 0.92	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~slope (very limited) ~too clayey (very limited) ~wetness (slightly limited)	1.00 1.00 0.03	Very limited ~slope (very limited) ~wetness (limited) ~too clayey (moderately limited)	1.00 0.99 0.45

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73287: (cont) Sonsac-----	Very limited ~depth to bedrock (very limited)	1.00	Very limited ~excess fines (thickest layer)	1.00	Possible source ~possible source (bottom layer)	0.42	Very limited ~slope (very limited)	1.00	Very limited ~hard bedrock <40" (very limited)	1.00
	~shrink-swell (very limited)	1.00	~excess fines (bottom layer)	1.00	~possible source (thickest layer)	0.42	~small stones (very limited)	1.00	~slope (very limited)	1.00
	~large stones (very limited)	1.00	~large stones (bottom layer)	0.30	~large stones (thickest layer)	0.30	~too clayey (very limited)	1.00	~cutbanks cave (very limited)	1.00
73288: Caneyville----	Very limited ~low strength (very limited)	1.00	Very limited ~excess fines (thickest layer)	1.00	Very limited ~excess fines (bottom layer)	1.00	Very limited ~too clayey (very limited)	1.00	Very limited ~hard bedrock <40" (very limited)	1.00
	~depth to bedrock (very limited)	1.00	~excess fines (bottom layer)	1.00	~excess fines (thickest layer)	1.00	~depth to bedrock (very limited)	0.99	~wetness (very limited)	1.00
	~shrink-swell (very limited)	1.00					~wetness (limited)	0.82	~too clayey (moderately limited)	0.41
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73289: Fourche-----	Very limited ~low strength (very limited)	1.00	Very limited ~excess fines (thickest layer)	1.00	Very limited ~excess fines (bottom layer)	1.00	Limited ~too clayey (limited)	0.83	Very limited ~wetness (very limited)	1.00
	~shrink-swell (moderately limited)	0.32	~excess fines (bottom layer)	1.00	~excess fines (thickest layer)	1.00	~too acid (slightly limited)	0.30	~cutbanks cave (slightly limited)	0.29
	~wetness (slightly limited)	0.26					~wetness (slightly limited)	0.26	~too clayey (slightly limited)	0.18
74634: Hartville-----	Very limited ~low strength (very limited)	1.00	Very limited ~excess fines (thickest layer)	1.00	Very limited ~excess fines (bottom layer)	1.00	Limited ~wetness (limited)	0.86	Very limited ~wetness (very limited)	1.00
	~shrink-swell (very limited)	1.00	~excess fines (bottom layer)	1.00	~excess fines (thickest layer)	1.00	~too clayey (limited)	0.83	~cutbanks cave (slightly limited)	0.29
	~wetness (limited)	0.86					~too acid (slightly limited)	0.06	~too clayey (slightly limited)	0.18

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74650: Higdon-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (slightly limited)	1.00 0.71 0.29	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Limited ~wetness (limited) ~too clayey (moderately limited)	0.71 0.39	Very limited ~wetness (very limited) ~flooding (moderately limited) ~cutbanks cave (slightly limited)	1.00 0.60 0.29
74652: Lecoma-----	Moderately limited ~shrink-swell (moderately limited) ~low strength (slightly limited)	0.45 0.22	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Not limited		Slightly limited ~cutbanks cave (slightly limited)	0.29
74653: Raccoon-----	Very limited ~low strength (very limited) ~wetness (very limited) ~shrink-swell (slightly limited)	1.00 1.00 0.17	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~wetness (very limited)	1.00	Very limited ~wetness (very limited) ~flooding (moderately limited) ~cutbanks cave (slightly limited)	1.00 0.60 0.29
Freeburg-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.71 0.39	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Limited ~wetness (limited) ~too clayey (slightly limited)	0.71 0.17	Very limited ~wetness (very limited) ~flooding (moderately limited) ~cutbanks cave (slightly limited)	1.00 0.60 0.29

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74656: Deible-----	Very limited ~wetness (very limited) ~low strength (limited)	1.00 0.78	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Very limited ~wetness (very limited)	1.00	Very limited ~wetness (very limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)	1.00 0.51 0.29
74661: Waben-----	Not limited		Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 0.99	Very limited ~small stones (very limited) ~too sandy (slightly limited)	1.00 0.12	Very limited ~cutbanks cave (very limited)	1.00
74662: Higdon-----	Very limited ~low strength (very limited) ~wetness (limited) ~shrink-swell (moderately limited)	1.00 0.71 0.37	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Limited ~wetness (limited) ~too clayey (moderately limited) ~small stones (moderately limited)	0.71 0.59 0.50	Very limited ~wetness (very limited) ~cutbanks cave (slightly limited) ~too clayey (slightly limited)	1.00 0.29 0.06
75376: Cedargap-----	Not limited		Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Possible source ~excess fines (bottom layer) ~possible source (thickest layer)	1.00 0.50	Very limited ~small stones (very limited) ~too sandy (moderately limited) ~too clayey (moderately limited)	1.00 0.34 0.33	Very limited ~cutbanks cave (very limited) ~wetness (limited) ~flooding (moderately limited)	1.00 0.61 0.60

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75388: Kaintuck-----	Not limited		Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Limited ~too sandy (limited)	0.73	Very limited ~cutbanks cave (very limited) ~flooding (moderately limited)	1.00 0.60
Relfe-----	Not limited		Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	1.00 0.30	Possible source ~possible source (thickest layer) ~possible source (bottom layer)	0.50 0.25	Very limited ~too sandy (very limited) ~small stones (very limited) ~area reclaim (very limited)	1.00 1.00	Very limited ~cutbanks cave (very limited) ~flooding (moderately limited)	1.00 0.60
75398: Kaintuck-----	Not limited		Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	1.00 1.00	Limited ~too sandy (limited)	0.76	Very limited ~cutbanks cave (very limited) ~flooding (moderately limited)	1.00 0.60
75412: Razort-----	Not limited		Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	1.00 1.00	Limited ~area reclaim (limited) ~small stones (moderately limited)	0.68 0.50	Very limited ~cutbanks cave (very limited) ~flooding (moderately limited)	1.00 0.60
75413: Relfe-----	Not limited		Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	1.00 0.30	Possible source ~possible source (thickest layer) ~possible source (bottom layer)	0.50 0.25	Very limited ~too sandy (very limited) ~small stones (very limited) ~area reclaim (very limited)	1.00 1.00	Very limited ~cutbanks cave (very limited) ~flooding (moderately limited)	1.00 0.60

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75427: Gabriel, GRAVELLY SUBSTRATUM PHASE-----	Very limited		Very limited		Limited		Limited		Very limited	
	~low strength (very limited)	1.00	~excess fines (thickest layer)	1.00	~excess fines (thickest layer)	1.00	~wetness (limited)	0.98	~cutbanks cave (very limited)	1.00
	~wetness (limited)	0.98	~excess fines (bottom layer)	1.00	~excess fines (bottom layer)	0.99	~too clayey (limited)	0.72	~wetness (very limited)	1.00
	~shrink-swell (moderately limited)	0.45							~flooding (moderately limited)	0.60
75450: Bloomsdale-----	Slightly limited		Very limited		Possible source		Very limited		Very limited	
	~shrink-swell (slightly limited)	0.07	~excess fines (thickest layer)	1.00	~excess fines (thickest layer)	1.00	~area reclaim (very limited)	1.00	~cutbanks cave (very limited)	1.00
			~excess fines (bottom layer)	1.00	~possible source (bottom layer)	0.33			~flooding (moderately limited)	0.60
			~small stones (thickest layer)	0.10	~small stones (thickest layer)	0.10				
75453: Sturkie-----	Very limited		Very limited		Very limited		Not limited		Moderately limited	
	~low strength (very limited)	1.00	~excess fines (thickest layer)	1.00	~excess fines (bottom layer)	1.00			~flooding (moderately limited)	0.60
			~excess fines (bottom layer)	1.00	~excess fines (thickest layer)	1.00			~cutbanks cave (slightly limited)	0.29
75459: Huzzah-----	Not limited		Very limited		Very limited		Not limited		Moderately limited	
			~excess fines (thickest layer)	1.00	~excess fines (bottom layer)	1.00			~flooding (moderately limited)	0.60
			~excess fines (bottom layer)	1.00	~excess fines (thickest layer)	1.00			~cutbanks cave (slightly limited)	0.29

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Map symbol and soil name	Source for roadfill		Source for sand		Source for gravel		Source for topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75460: Horsecreek, WET SUBSTRATUM PHASE-----	Very limited		Very limited		Very limited		Slightly limited		Moderately limited	
	~low strength (very limited)	1.00	~excess fines (thickest layer)	1.00	~excess fines (bottom layer)	1.00	~too clayey (slightly limited)	0.13	~flooding (moderately limited)	0.60
			~excess fines (bottom layer)	1.00	~excess fines (thickest layer)	1.00			~cutbanks cave (slightly limited)	0.29
									~wetness (slightly limited)	0.16
99000: Pits, quarries-	Not rated		Not rated		Not rated		Not rated		Not rated	
99001: Water-----	Not rated		Not rated		Not rated		Not rated		Not rated	
99003: Miscellaneous water-----	Not rated		Not rated		Not rated		Not rated		Not rated	